

**Live webinar on
Learning through Play
with Bo Stjerne Thomsen,
Global Head of Research,
the LEGO Foundation**



**Thank you for your active
participation in our first live
webinar!**

Visit PlayFutures and become a member at :

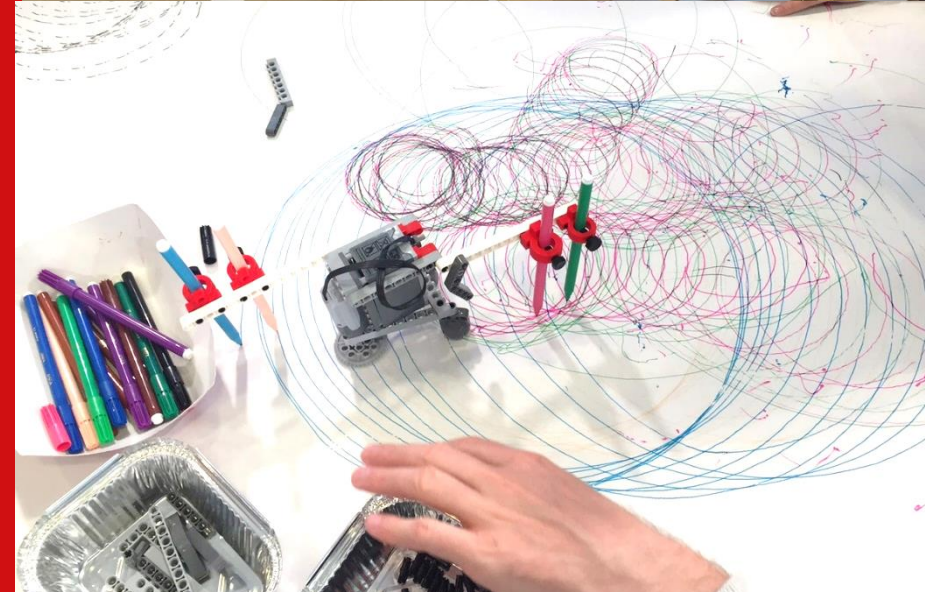
<https://www.playfutures.net/>

The LEGO® Idea

The LEGO idea is based on LEg GOdt (Play Well).

With the LEGO bricks, we can build anything we can possibly imagine. They act as they were glued, and yet they can easily be taken apart and reconfigured into a new idea.

When we do this, we are not only creating things, but also evaluating, reflecting and recreating to achieve new possibilities.





we share a mission with
the LEGO Group

**inspire and
develop the
builders of
tomorrow**

The LEGO Foundation

The LEGO Foundation



The aim of the LEGO Foundation is to:

re-define play and re-imagine learning


We are dedicated to building a future where learning through play empowers children to become:

Creative, engaged, lifelong learners.



Redefine Play & Reimagine Learning

Playing and Learning have been seen as contradictory to each other.

play
/pleɪ/ 

verb

1. engage in activity for enjoyment and recreation rather than a serious or practical purpose.
"the children were playing by a pool"
synonyms: amuse oneself, entertain oneself, enjoy oneself, have fun, have a good time, **relax**, **rest**, be at leisure, occupy oneself, divert oneself, play games, **frolic**, **frisk**, **gambol**, **romp**, **cavort**, **caper**; **More**
2. take part in (a sport).
"I play squash and badminton"
synonyms: take part in, participate in, engage in, be involved in, join in, compete in, **do**
"I used to play football"



Play is often understood as recreation doing things without purpose, - or just for the sake of it.

This emphasizes the strong role of children's agency, choice and initiative (i.e. UN Rights of the Child).

Learning is often understood as formal education, based on the policies of the education systems.

Quantified as enrolment in formal education, but less emphasis on quality and lifelong learning.

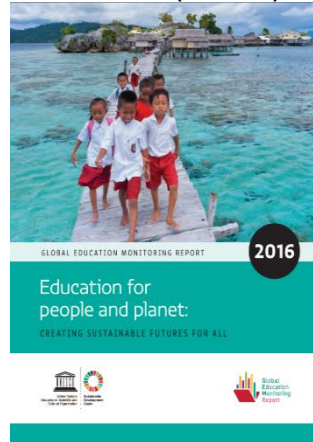
Why "Creative, engaged, lifelong learners"

Workforce (WEF)



65% of children entering primary school today will **ultimately end up working in completely new job types that don't yet exist.** Radically changing nature of work with more flexible work.

Education (UNESCO)



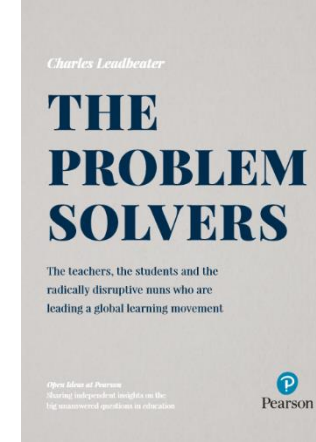
The Education 2030 Framework for Action states that all individuals should acquire a solid foundation of knowledge, develop **creative and critical thinking and collaborative skills**, and build curiosity, courage and resilience.

Policy (Mitchell)



There are fundamental, structural changes underway in shape of the economy and the organisation of society. **Our education systems are not yet adequately preparing young people for the future**, and already the data is showing this strain.

Schools (Pearson)



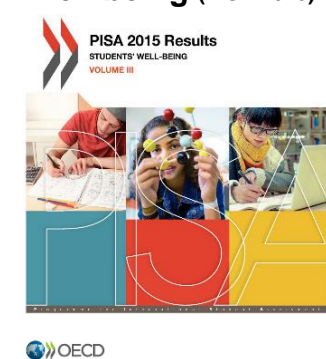
The best schools are dynamic places to learn. The core purpose of education needs to shift – from teaching students to follow instructions to preparing students to identify and solve problems, based on creative, critical thinking and collaborative skills.

A faster future (MIT)



The world is more complex and volatile today than at any other time in our history and the future will run on an entirely new operating system. Nine organizing principles for navigating and surviving this tumultuous period.

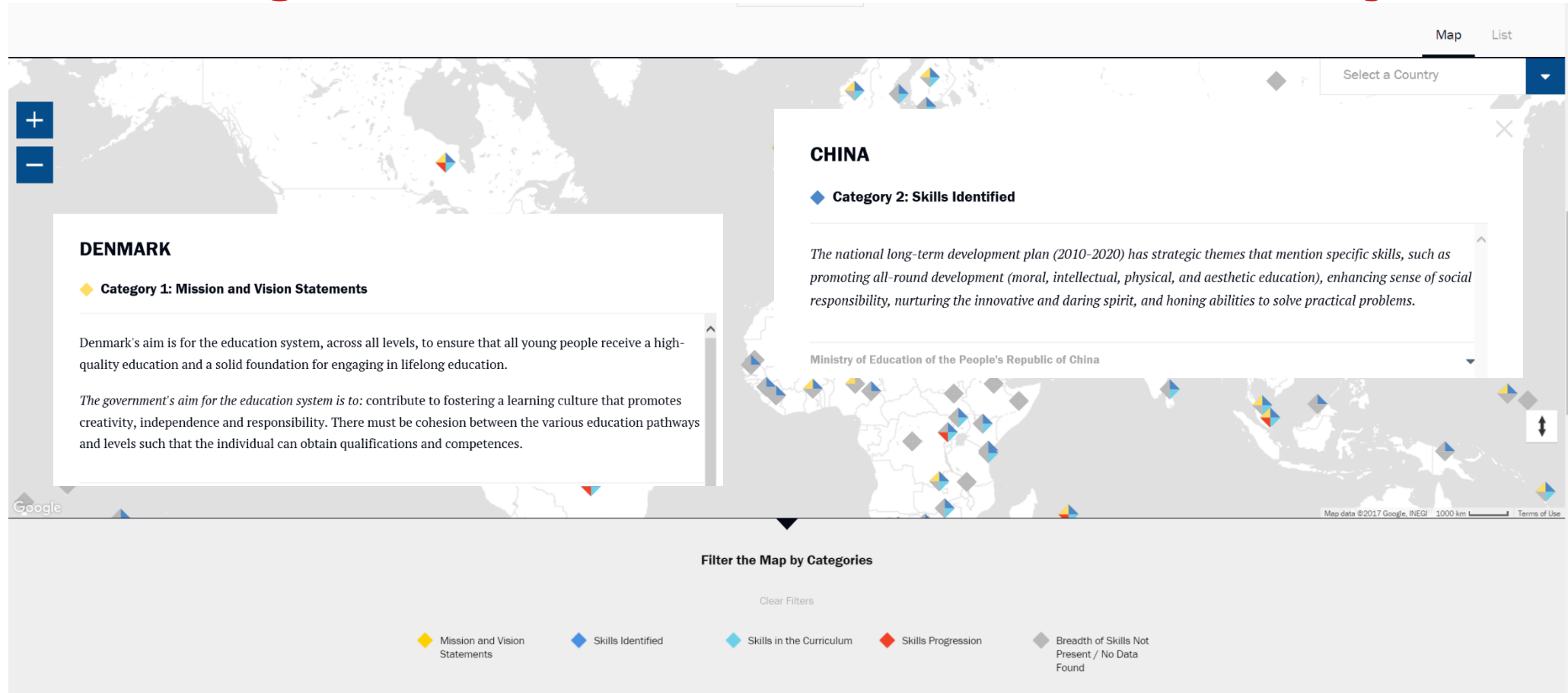
Well-being (PISA 2015)



The positive impulses that promote healthy development e.g. interest, engagement, motivation to achieve. **Adolescents who feel part of a school community are more likely to perform better academically and more motivated in school.**

Brookings Institution

Visualizing breadth of skills across the education system



Creativity, critical thinking, communication and problem solving are the 21st century skills most frequently identified by countries. (Kare, Kim and Anderson, 2016)

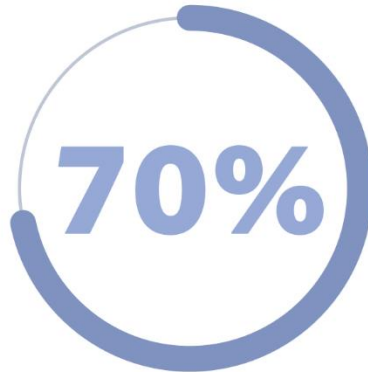
<https://www.brookings.edu/research/visualizing-the-breadth-of-skills-movement-across-education-systems/>

State of Create 2016

Creativity is
valuable to society
and the economy.

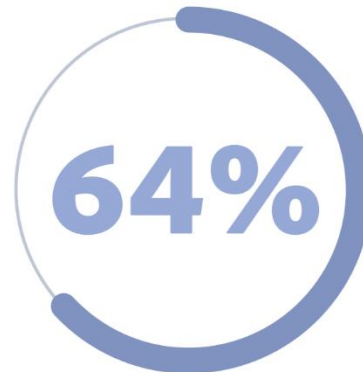
Being more
creative, makes
people better...

VALUE OF CREATIVITY TO **SOCIETY**
(% GLOBAL, TOP 2 BOX)



GER	U.S.	U.K.	FRA	JAP
83%	82%	72%	62%	48%

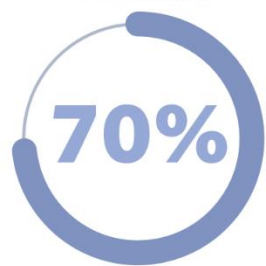
VALUE OF CREATIVITY TO **ECONOMY**
(% GLOBAL, TOP 2 BOX)



U.S.	GER	U.K.	FRA	JAP
77%	73%	71%	56%	43%

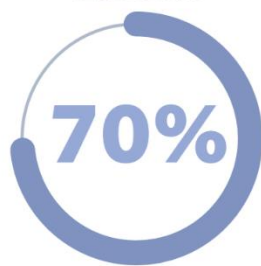
Q24. How valuable is being creative to society? (Top 2 box <Very/Extremely valuable> reported)
Q25. How valuable is being creative to the economy? (Top 2 box <Very/Extremely valuable> reported)
Base sizes: Global = 5,026; U.S. = 1,009; U.K. = 1,004; Germany = 1,006; France = 1,007; Japan = 1,000
Photo by Victoria Siemer

Workers



U.S.	GER	U.K.	FRA	JAP
84%	76%	74%	72%	47%

Leaders



U.S.	U.K.	GER	FRA	JAP
86%	72%	71%	69%	51%

Parents



U.S.	GER	U.K.	FRA	JAP
85%	74%	73%	69%	45%

Students



U.S.	U.K.	GER	FRA	JAP
86%	75%	73%	68%	43%

Q21. Please indicate to what extent you agree or disagree with the following statements. Being more creative helps make people... (Top 2 box <Somewhat/Strongly agree> reported)
Base sizes: Global = 5,026; U.S. = 1,009; U.K. = 1,004; Germany = 1,006; France = 1,007; Japan = 1,000
Photo by Victoria Siemer

BOTH STUDENTS AND TEACHERS AGREE THE MOST EFFECTIVE WAYS OF LEARNING ARE:



... OF A FUTURE WE CAN'T YET ENVISION.



STUDENT
83%

83% of students
believe they will
be **CREATING**
in
their future careers.

94% of teachers
feel that their Gen Z
students will one
day have careers that do
not exist today.



TEACHER
94%

Academic is organized by discipline... ... but play is trans-disciplinary.

This is challenging because we find research about play in unpredictable places, departments and journals.



This makes it hard to find knowledge about play. For those interested in play, it's harder to collaborate to develop new knowledge.

Our research partnerships

MASSACHUSETTS INSTITUTE OF TECHNOLOGY



MIT Media Lab

For the past 30 years, the LEGO Group and the MIT Media Lab have collaborated on projects based on a shared passion for learning through play. Today, the LEGO Foundation and the Lifelong Kindergarten Group continue this tradition by pioneering new technologies and activities to engage children in playful and creative learning experiences.

UNIVERSITY OF CAMBRIDGE



PEDAL Research Centre

The PEDAL Research Centre is a central partner towards building an evidence base to help us understand the role of play in children's lifelong learning and development. The Centre's research addresses three key questions which are fundamental to developing our understanding of play and playfulness in children: 1) What is play?, 2) How does play develop?, and 3) Does play have a role in school?

TSINGHUA UNIVERSITY



Laboratory for Lifelong Learning

The LEGO Foundation and Tsinghua University are establishing a Laboratory for Lifelong Learning Tsinghua University (TULLL) in Beijing to support play and creativity from pre-school to university, and a new educational reform in China. TULLL will develop new learning tools and methods, and advocate for an increased knowledge about children and students' creativity, play and learning.

AARHUS UNIVERSITY



Interacting Minds Centre

The purpose of collaborating with the Interacting Minds Centre at the Aarhus University is to conduct basic and applied research into the properties and mechanisms of playful learning experiences. The aim is to develop tools and methods for documenting, evaluating and measuring play and learning experiences; expand the research network and facilitate knowledge transfer to associated partners.



Harvard University Center on the Developing Child

Using the science of early childhood and brain development as a source of new ideas that can be used to develop more effective policies & services focused on the early years of life. Testing out ideas through a science-based innovation approach to develop new interventions.



Exploratorium The Tinkering Studio

The LEGO Foundation is partnering with the Tinkering Studio to integrate technologies into tinkering activities and to support innovative tools and learning environments on learning through play. The Tinkering Studio is part of the Exploratorium as the internationally renowned museum of science, art and human perception.

HARVARD GRADUATE SCHOOL OF EDUCATION



Project Zero

The Pedagogy of Play (PoP) project is a two-year participatory research initiative in partnership with the International School of Billund and Project Zero at the Harvard Graduate School of Education. Supported by the LEGO Foundation, PoP explores how teaching methodologies around playful learning can be developed.

UNIVERSITY OF COPENHAGEN



Baby Lab

This project aims to expand ideas of learning through play by including new foci on child exploration, parental support of exploration, interactive, socio-emotional aspects, and specific characteristics of materials in a playful child-caregiver interaction in cohorts of children 2-5.

TUFTS UNIVERSITY



Center for Engineering Education and Outreach

Researchers from Center for Engineering Education and Outreach at Tufts University are using their experience to guide the development of a new Creator Space at the International School of Billund to help integrate classical engineering topics such as design and testing into the learning experience for students, including kindergarten.

BRAC UNIVERSITY



Play Lab

This project aims to establish educational initiatives for children 3-5 through a guided-play curricula facilitated by trained play agents in community-based spaces called Play Labs. Research within BRAC University will focus on the impact on children's whole child development.



Design School Kolding

A Master Degree in Design for Play including a professorship, associate professor, PhD's, design lab and project management of hub for design and play in order to develop research, innovation and education on how to design for children's playful experiences.



Reggio Children Foundation

The Reggio Children Foundation is based on the experience of the Reggio Children innovative infant-toddler centres and preschools. The LEGO Foundation works with Reggio Children to understand how digital technologies act as a language for children to naturally explore, express and understand themselves through experiential, active learning.

We recently launched a global research network of individual researchers and practitioners working with research.



Whole Child Approach

How children's curiosity, and urge to learn and explore things, drives human growth.

0-1 Years



4-5 Years



7-8 Years



6-7 Years

5-6 Years

4-5 Years

the **critical window** of childhood



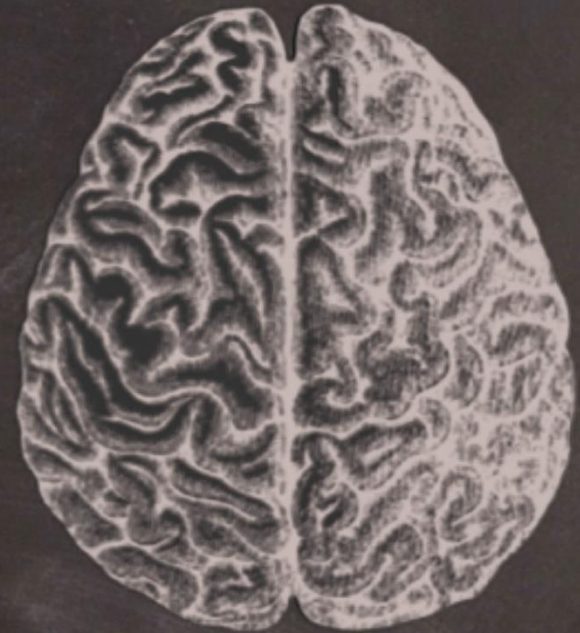
Birth
30%



1.5 years
50%

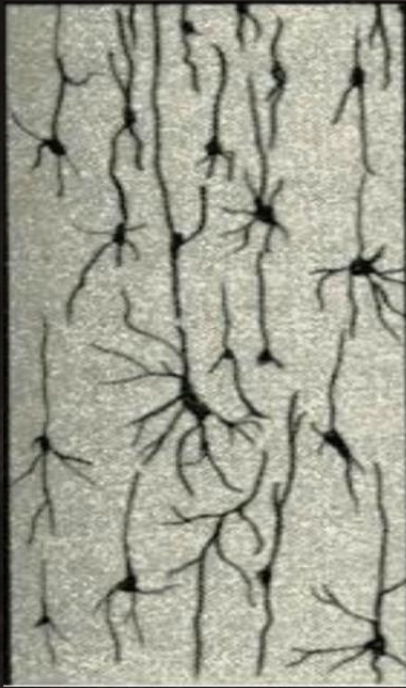


4-6 years
90%

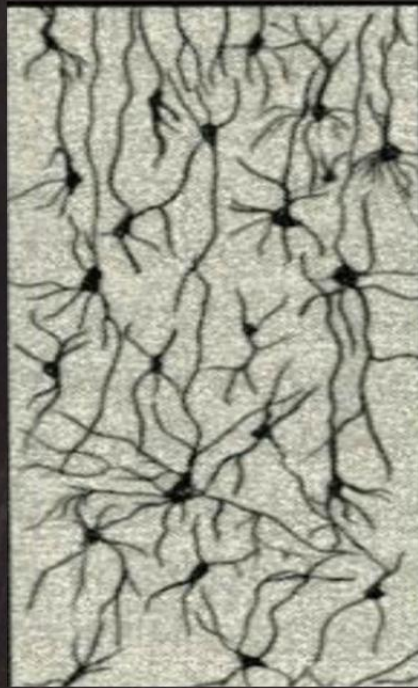


Adult
100%

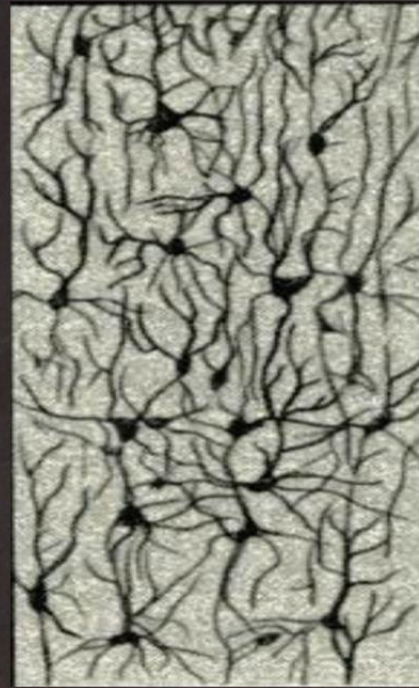
Brain Architecture Established Before School Age



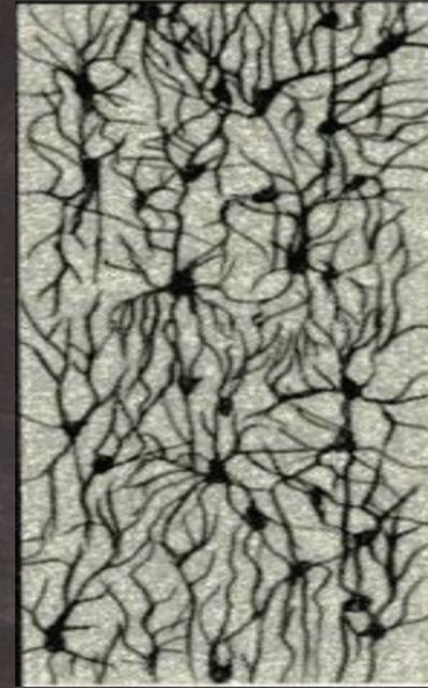
Birth



1.5 years



4-6 years



Adult

With such an amazing development in just 4-5 years, we have to ask:

What can we learn from a 5 year old?

What are the characteristics that make children able to develop and learn such amazing things in such a short time?

How are these characteristics relevant for how adults think about and apply learning through play?



How is a 4-5 year old competent?

Being Me:

- how to use the body
- how to know myself

Making sense of the World:

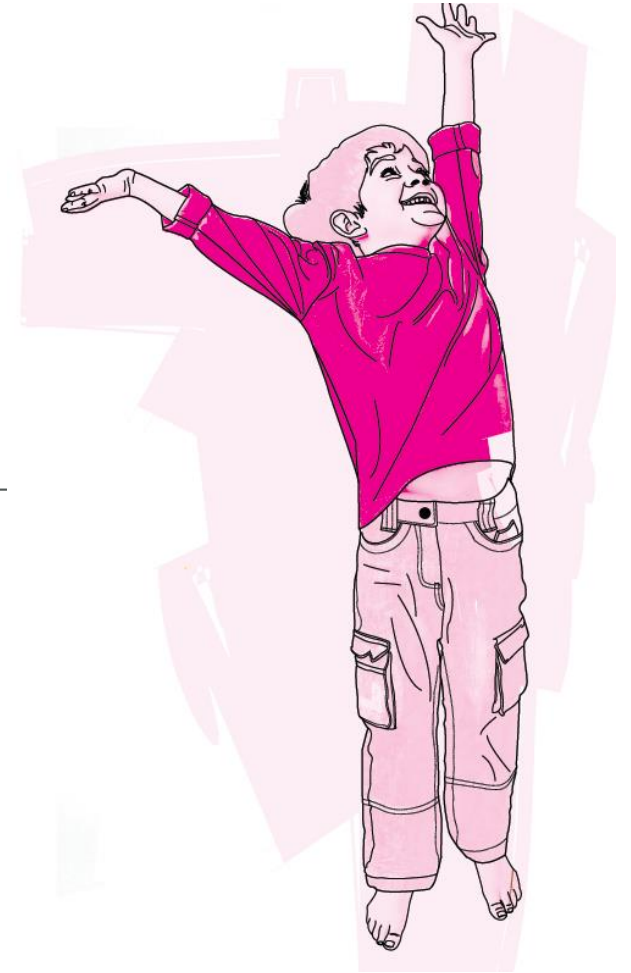
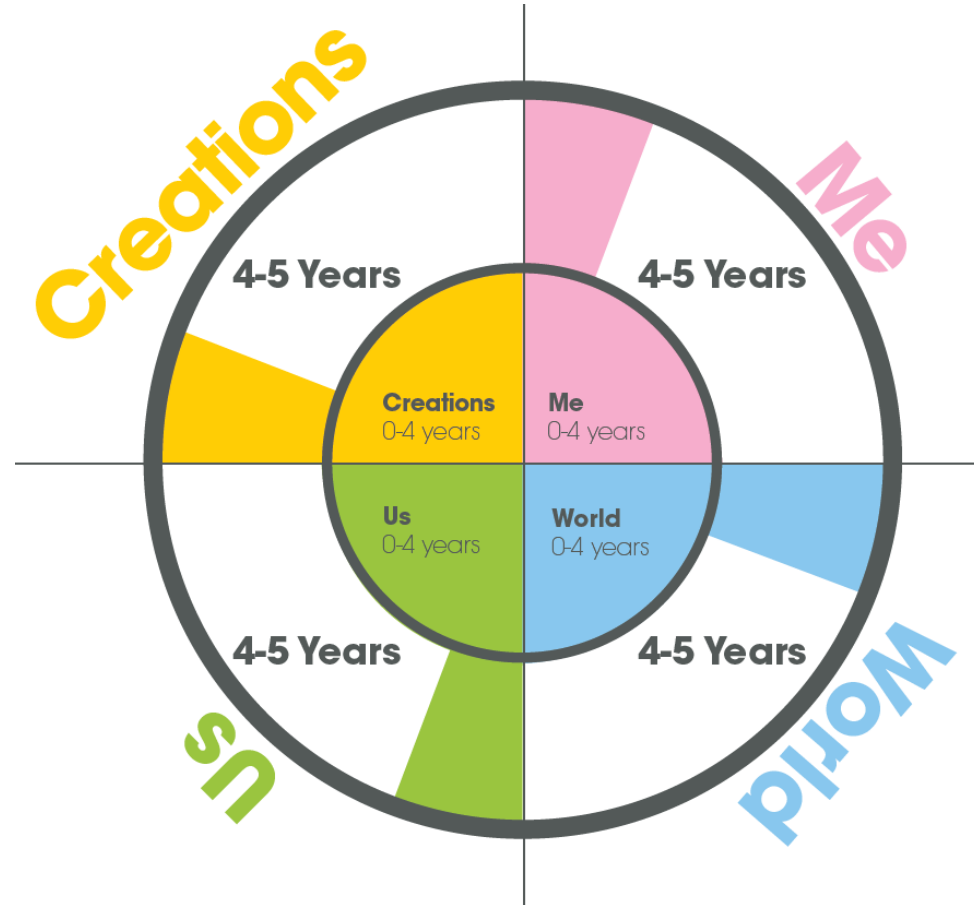
- how to explore
- how to seek logic

Us Growing together:

- how to relate to others
- how to understand others

Create to realize visions:

- how to imagine
- how to create



What can we learn from a 5 year old?

Playful experiences that supports deeper learning

Joyful

Enjoying what you do by being open to new experiences,
sparking curiosity and seeking new information.

Meaningful

Doing things that are relevant and meaningful with the ability to make sense and connect to own experiences.

Actively engaging

Being actively engaged and fully absorbed into something with your full body and senses.

Iterative

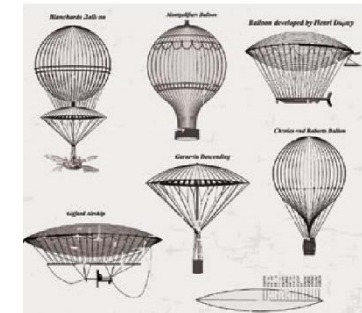
Iterating by experimenting, testing things out and trying different strategies.

Socially interactive

Being social by sharing ideas, getting feedback and collaborating on difficulties

"What we mean by Learning through Play", LEGO Foundation 2017

The **LEGO** Foundation



Do these characteristics last a lifetime ?

Enjoyment in learning....

....may lead to better well-being.

Love of learning (and gratitude) was the character strength most predictive of well-being (among 24 of the indicators). Love, honesty, hope and humor came very close” (controlled for age and gender (age 18 – 71, 517 people) (Kaufmann 2015).

Meaning and sense of purpose...

... may contribute to long-term health and life satisfaction.

Having meaning and purpose in life is related to longevity, health, and quality of life. (Steptoe, Deaton, & Stone, 2015). 1 in 4 students show signs of depression worldwide (27%), 11% with suicidal ideation and 16% on psychiatric treatment. (Rotenstein et.al. 2016, meta-analysis on medical students), mainly due to the school experience, restructuring curricula, pass-fail testing etc.

Active Engagement...

... supports community, citizenship, democratic skills etc.

“Supporting student participation by allowing students to have influence over the decisions being made and actions being taken, provides positive effects on life skills, self-esteem and social status, democratic skills and citizenship, student–adult relationships and school ethos.” (Mager & Nowak 2011). Also a key factor in successful early childhood interventions (Abecedarian, Perry Preschool) that show positive adult outcomes (Heckman et al., 2015).

Iteration with experimentation and ‘testing things out’...

... supports lifelong entrepreneurship and innovation.

“Early experiences of testing things out, not stopping after failure and go ahead with ideas with persistence, determination, motivation and discipline were distinguishing characteristics of entrepreneurial undertakings.” (Shavinina 2013, p. 238)

Social Interactions...

... may support meaningful relationships, social cohesion and well-being.

Social interactions with family, groups or community may lead to social integration that promotes a sense of belonging and establishes or maintains positive interpersonal attachments (Hagerty et al. 1996) and wellness (Jose, Ryan, & Pryor, 2012). And, early social competence is an indicator for important long-term outcomes and at most is instrumental in influencing other developmental variables that impact wellness (Jones, Greenberg, Crowley, 2015).

Learning through play

AGE: 1 4 8 12 16 20 24 28 32



**Playful experiences
in the early years,
allows you to acquire...**



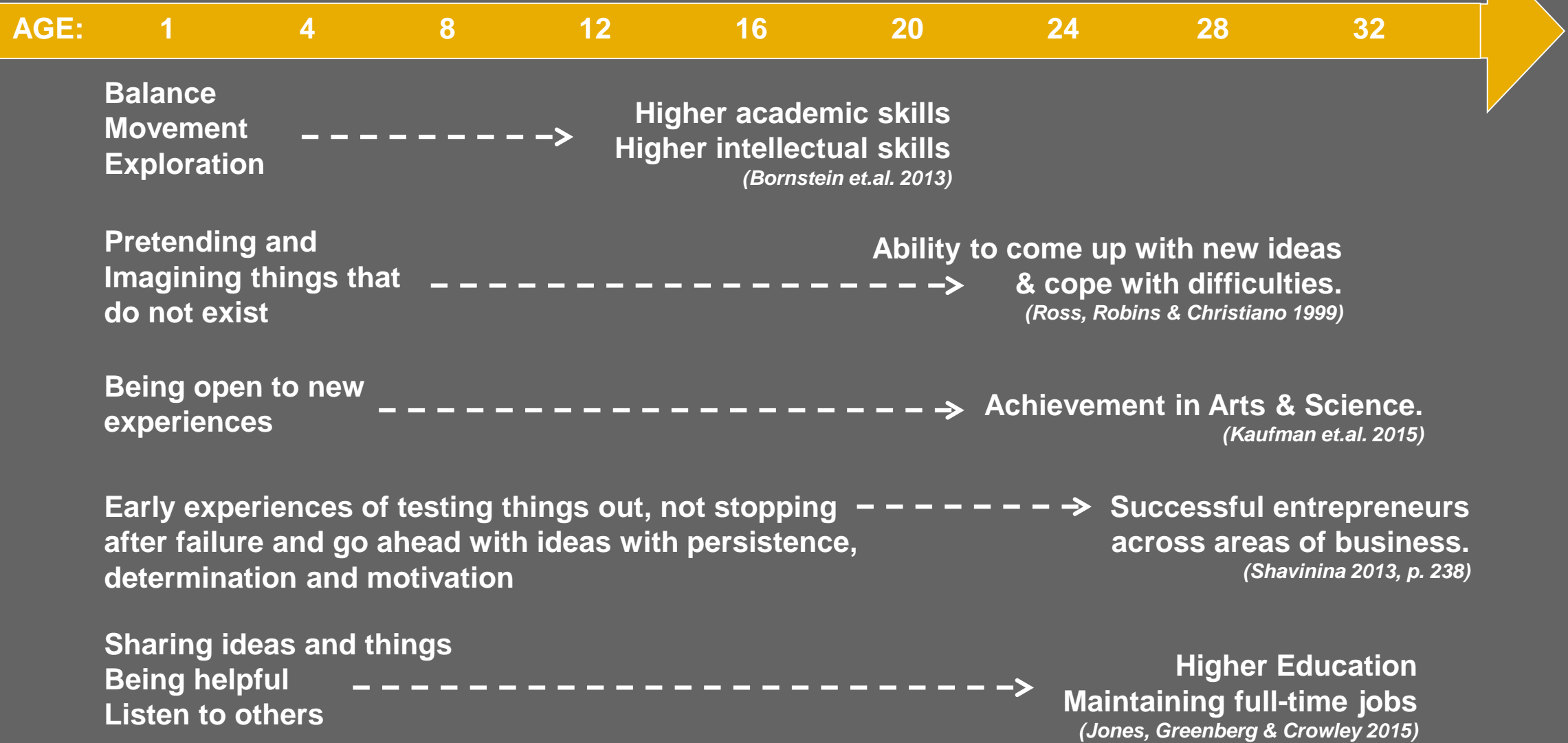
**...the critical skills for
learning throughout a
lifetime.**



From experiences in childhood...

...to a successful adulthood

Playful experiences support lifelong learning



Child-adult interactions

Support children by promoting adult-child interactions that are:

- **sensitive** (taking child's perspective and responding),
- **positive** (loving, respectful, admiration for child), and
- **cognitively stimulating** (expand the child's knowledge/abilities)



An environment that supports learning through play

Playing

Encourage discovery, experimentation and new questions, by being inspired by the interests of the learner to guide the topics.

Making

Support exploration of ideas and new possibilities, by providing many physical materials, and opportunities to try out new things.

Sharing

Look for opportunities to work together, encourage feedback, and help share challenges and successes.

Thinking

Provide opportunities for documenting their processes, explain their reasoning and encourage them to iterate and reflect.



More information on *Learning through Play* ?



The LEGO Foundation

Search the site

WHO WE ARE PROGRAMMES RESEARCH CENTRE LEGO IDEA CONFERENCE NEWSROOM CONTACT US

Five characteristics of playful experiences

FIVE CHARACTERISTICS OF PLAYFUL EXPERIENCES

We say there are five characteristics of playful experiences which support deeper learning. These ebb and flow as children are immersed in an activity.

[Read more>>](#)

RESEARCH AND INNOVATION NETWORK

playfutures

PlayFutures is a global by-invitation research and innovation community where participants can collaborate, interact in activities, share strategies and deepen their understanding of learning through play.

[Go to site>>](#)

ANNUAL REPORT 2016

LEGO Foundation Annual Report 2016

from LEGO Foundation

is out

00:50

HD vimeo

Annual Report 2016

Read about who we are, our strategic focus and programmes as well as examples from partnerships and projects in 2016.

ANNOUNCEMENT

LEGO PROFESSOR OF PLAY IN EDUCATION, DEVELOPMENT & LEARNING

PAUL RAMCHANDANI

LEGO® Professor of Play appointed

World-leading researcher announced as the first LEGO Professor of Play in Education, Development and Learning.

[Read more>>](#)

<http://www.legofoundation.com/>

playfutures

SAVE THE DATE: NOW WITH ACCESS INFO - Live webinar with Bo Stjerne Thomsen on LTP.

PLAYFUTURES TEAM April 26, 2017

Discover what we mean by Learning through Play (LTP) May 29, 2017 from 13:45-14:45 CEST. We are excited to announce that a series of live webinars will soon be launched. The first live [Continue Reading...](#)

What we mean by Learning through Play

We imagine a world where play and learning go together, like the wings of a butterfly

[LEARN MORE](#)

Upcoming Events

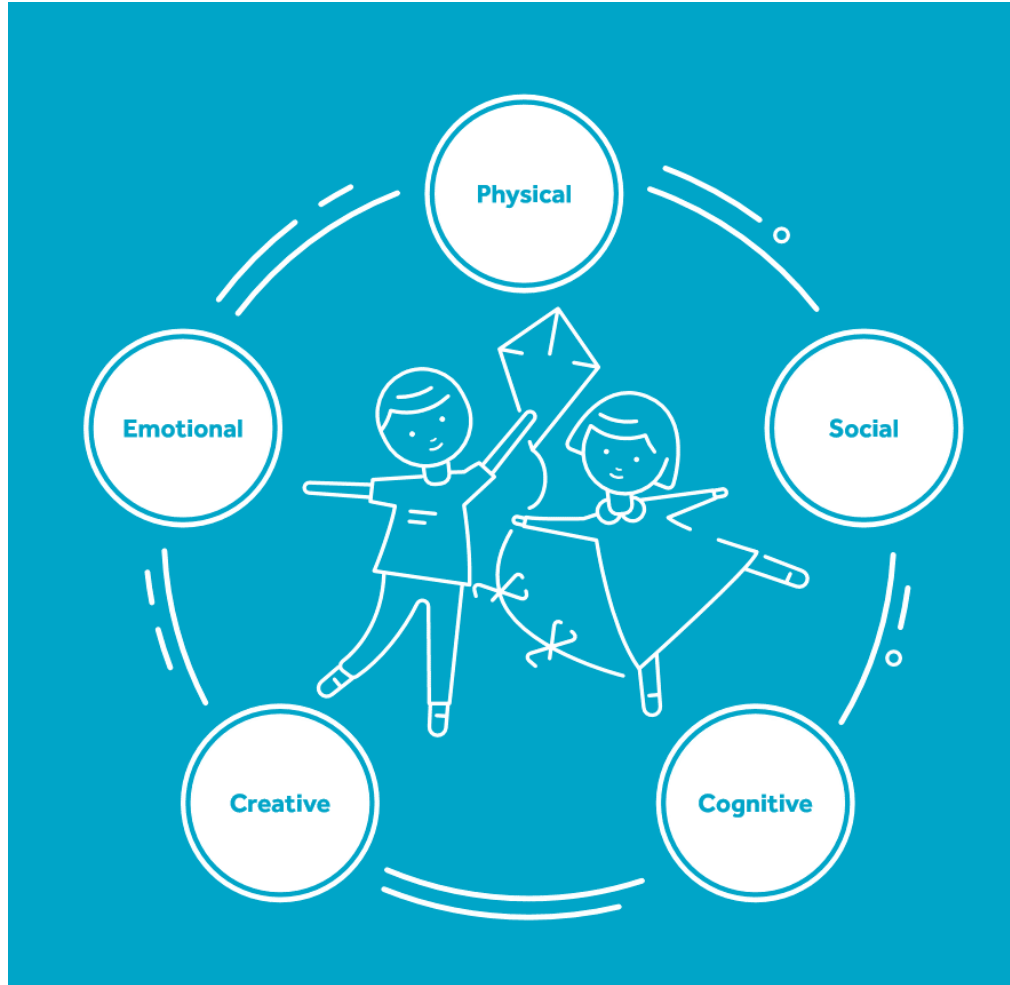
ALL EVENTS		
May 29, 2017	Live webinar with Bo Stjerne Thomsen on Learn...	Online
May 31, 2017 - Jun 1, 2017	Annual Conference on Education and Lifelong L...	Tallinn University Of Technology, Tallinn
Jun 5, 2017 - Jun 6, 2017	Association of Children's Museums: Designing f...	Skyline Gallery 2121 Children's Museum Drive D...

<https://www.playfutures.net/>

Thank you



Playful experiences



"What we mean by Learning through Play"
LEGO Foundation 2017

The LEGO Foundation

Emotional skills

Understand, manage and express emotions by building self-awareness and handling impulses, as well as staying motivated and confident in the face of difficulties.

Cognitive skills

Concentration, problem solving and flexible thinking by learning to tackle complex tasks and building effective strategies to identify solutions.

Physical skills

Being physically active, understanding movement and space through practicing sensory-motor skills, developing spatial understanding and nurturing an active and healthy body.

Social skills

Collaborate, communicate and understand other people's perspectives through sharing ideas, negotiating rules and building empathy.

Creative skills

Coming up with ideas, expressing them and transforming them into reality by creating associations, symbolising and representing ideas and providing meaningful experiences for others.